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TWO HYDROELECTRIC PLANTS BEING BUILT

NOVI VINODOL POWER PLANT UNDER CONSTRUCTION -- Rad, No 186, 5 Aug 49

A giant hydroelectric power plant is being constructed in the southern part of the Gorski Kotar, in the Fuzine - Vinodol sector. Up to 30 percent of the water in this region will be stored in three artificial basins.

Kriz Creek will flow into an area surrounded by dikes and will form Lake Kriz. and the Lioanka River, with its small tributary the Ispanska, will f Lake Bajer. The biggest lake, the Lokvar, will be formed by the Lokvarka River and will receive waters from Lakes Bajer and Kriz through pumping stations and special tunnels for which most of the earth and concrete work has been finished. Water collected in the lake will flow through pipes and tunnels to the Razmir peak and down toward Vinodol. With a head of 700 meters and a gradient of 30 degrees, each liter of water discharged will develop approximately 7 horsepower.

At present, the hydroelectric power plant at Zeleni Vir, near Skrad, produces 1,000 horsepower in fall and winter (when there is ample water), but only 150 to 200 horsepower in the summer. Several power plants at Futine, using wood for fuel and with frequent breakdowns, produce 400 horsepower, and the power plant at Gričevica (not in Gorski Kotar), with its inefficient diesel motor, produces only 300 horsepower. Altogether, 1,700 horsepower are produced in the region in time of abundant water and in the absence of breakdowns.

The new project will be in partial operation during the First Five-Year Plan (1947 - 51) and in full operation during the Second Five-Year Plan. The great hydroelectric power plant will be 70 times more powerful than the three existing power plants combined. Instead of the 1,700 horsepower produced by the three inefficient old plants, a turbine will produce 120,000 horsepower or 88,000 kilowatts. This great power will be developed by brook water collected in large reservoirs. From the reservoirs, the water will flow through pipes and tunnels and will descend abruptly through steel pipes, which will be 46 millimeters thick at the lower end in order to withstand 66 atmospheres of pressure. The water will flow at a speed of 110 meters per second and up, and will develop a 26-ton force on the blades of the turbines.

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This gigantic power plant is built underground. A large emplacement for turbines is cut into a mountain. Trestles for machines are now being built in this emplacement. The first generator will begin operation next year. Power from two generators will flow over high-tension power lines in the second half of 1951, when the Novi Vinodol hydroelectric power plant will enrich the Yugoslav electrical system with 185 million kilowatt-hours.

Even after the full electrification of villages and towns, and after all needs of the forest industry have been met, the Gorski Kotar will not begin to consume all the power produced by this power plant. For the time being, sufficient power will be produced by Zeleni Vir (the thermoelectric plants at Fuzine and Crikvenica will be dismantled as unprofitable) to meet maximum consumption, and a small hydroelectric power plant of 4,000 horsepower (four times more powerful than the plant at Zeleni Vir) will be built, utilizing the fall of 50 meters between Lakes Bajer and Lokvar.

The Novi Vinodol power plant will be connected with the hydroelectric power plants on the Soca, Drava, and Ozlja rivers, and with the Zagreb thermoelectric power plant. It will supply power to those plants, as well as to Istria and the Slovenian Primorje, because the hydroelectric power plant on the Soca is too weak to meet the needs of the newly built industries.

WORK ON MOSTE PLANT PROGRESSING RAPIDLY -- Borba, No 174, 24 Jul 49

Deep in the defile of the Sava River, near Zircovnica, where a new bed for the river is being prepared, the large turbines of the future Moste hydroelectric plant will be installed.

Work has been under way for 2 years, but is proceeding rapidly. According to calculations, one generator will be built by December 1949. The Moste power plant will be the second large hydroelectric plant built during Tito's Five-Year Plan. The first was the plant on Maribor Island.

As planned by Engineer Omerz, a bridge built nearly 60 meters above the Sava leads over the defile to the dwellings and workshops on the lower bank of the river, where residential structures, a workers' restaurant, union premises, and other buildings have been built.

Rocks are being crushed and mixed with concrete in special enclosures. New machinery for mixing concrete, designed by Engineer Omerz, began operating here recently. This results in a yearly saving of nearly 350,000 dinars and the quality of the concrete is better.

To make work in the river bed possible, the Sava first had to be diverted by a special underground ditch. At first, semicircular partition walls were to be built. Later it was ascertained that the materials were too weak to stand such work. A new and better method of draining excess water from the river bed was developed at the hydroelectric laboratory at Ljubljana. From the lake which will be formed when the dam is ready, water will flow through a special tunnel, under great pressure, to a turbine far below the river bed. The building of this tunnel has been the most difficult part of the entire project. Despite unsuitable materials and constant flooding, the tunnel has been built and its walls are already covered with concrete. Huge metal pipes, built this year in Yugoslav factories for the first time, will soon be installed in the tunnel. The emplacement for the first turbine is ready, and cranes for unloading the parts of the turbines can already be seen at the railroad station. The power will be used by the metalworks at Jesenice.

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